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# RECENT AND PERIODICAL LITERATURE.

## REVIEWS OF BOOKS.

**Board of Control.** *The 78th Report of the Lunacy Commissioners or the 11th Report of the Board of Control (since their designation was changed in 1913).* Published by H. M. Stationery Office, Price 12s. 6d. Pp. 454.

THIS, which is the 78th Annual Report issued by the Lunacy Commissioners and the 11th of the Board of Control, is for the year 1924, and must be of inestimable value to those desirous of knowing how the insane are treated in this country (England and Wales), how they are classified, what they cost, and in what kind of Institutions they are cared for. It is of paramount importance to the Eugenist who wishes to preserve the mental health and physical vigour of the individual and the race. The basic creed of the Eugenist is the belief founded upon experience of the immense advantage of being "well-born," i.e., of coming from good stock; and this is emphasized in an early paragraph of the Report, which calls attention specifically to the unfortunate need throughout the country of additional institutional accommodation for the mentally defective, who, in consequence, against the teaching of all Eugenists, legitimately or illegitimately reproduce their kind, and thus seriously lower the standard of mental and physical vigour in the race. Under the provisions of the Mental Deficiency Act 1913, statutory protection was afforded for this class and the Board of Control regret that the lack of suitable accommodation for the care and control of these people is seriously hampering the purpose and operation of the Act.

The actual causation or the proximate contributing factor in insanity is still a perplexing problem, requiring research and investigation; but all Eugenists believe—as certainly do those who have clinical experience of mental diseases, that heredity is a most important factor and that there exists without any doubt a psychopathic inheritance in most of those who suffer from insanity, epilepsy, feeble-mindedness, alcoholism and probably criminality. These have inherited a tendency to a failure in a competitive environment, and therefore tend to some form of mental breakdown under unfavourable conditions of stress or adversity, or to a loss of self-control which leads them to yield readily to temptation, or to neglect prudent considerations which make a strong appeal to the well-balanced healthy person, and there is much support to be given to the so-called "polymorphic" theory of the heredity of mental diseases, i.e., there is some unitary something in the psycho-pathic inheritance, which makes itself manifest in some one or other of the many forms of nervous and mental disease and it is essential if the race is to be maintained in health and efficiency, that these persons should refrain from parenthood by compulsion and should be prevented, preferably by segregation, from reproducing their kind.

Reference is made in this Report to the special value of early treatment in mental cases, a view which is entertained by all psychiatrists and only the legislature finds itself unconvinced, for Lord Russell's Bill in 1914 and the Mental treatment Bill of 1923, both providing for the non-certified treatment of mental diseases, still remain unsanctioned by Parliament.

As is well-known, no case of mental disease can at present, under the Law as it stands, be received as a Voluntary patient (or boarder) into any County or Borough Mental Hospital, only in a private Asylum (licensed house) or a Registered Hospital is this legal, which gives favour to the statement that in lunacy there is one law for the rich and another for the poor. The word "Asylum," throughout the Report, is replaced by the more hopeful term "Hospital." The fact that there is no legal sanction for voluntary treatment in the institutions named, prevents many mental cases from seeking and undergoing early treatment, and there is the additional disinclination on the part of medical men and magistrates to certify any person unless the conditions are desperate and the patient is highly dangerous either to himself or to others.

Much stress, as we shall see later, is laid upon the continued care and kindly supervision of those patients who leave the Mental Hospitals. All patients who are recovering are being encouraged to experience a "trial" on leaving the Hospitals, either to their friends or to relatives willing to receive them for varying periods, their names being still retained upon the books of the Mental Hospital. During the whole of this period it is possible for their friends who may or may not be contributing to their support to receive a weekly sum for their maintenance equivalent to that paid for them by the local authorities responsible for their maintenance in the Mental Hospital. This is naturally regarded as being the best form of preventive treatment. It supports them during a time of probation, it keeps them until they get employment and it maintains a minimum of control until they are finally discharged, also during the whole of this period it is possible for them to return under care and treatment if they show symptoms of relapsing mentally. The rate of maintenance is generally paid by the Parish to which the patient belongs and it is in the discretion of the County or Borough Councils whether they grant the allowance.

It is probably known that the Board of Control must visit every public Mental Hospital supported by the rates, county or borough, at least once in each calendar year. They visit, singly or any two of them, the Registered Hospitals of which there are about a dozen in England and Wales, twice a year. They visit every provincial private asylum (licensed house) twice a year, but in the London area these are visited quarterly, whilst the provincial ones are visited quarterly by local justices appointed for the purpose at the Michaelmas Quarter Sessions. At each visit all the patients must by law be seen and a report must be made at the time of the visit. These reports are published in a special Blue Book (such as the one now reviewed), and they are in this form presented to Parliament and thus become public documents available for anyone interested in the subject to read or study.

This Report for 1924 is divided broadly into a record of (1) the administration of the Lunacy Acts; (2) the care and treatment of mental defectives under the Mental Deficiency Act 1913, a group of cases, which, since the passing of the Act and since the establishment of medical affairs of schools, is specially brought forward for study and treatment by the more systematic co-operation of the school teacher, the school medical officer, and the Mental Hospital Authorities. Finally, (3) the Report describes cases and conditions which belong generally to the two other groups.

As regards the first part, it is noted that on January 1st, 1925, there were 131,551 insane persons under care in England and Wales, an increase of 1,217 on the numbers of the previous year, which is only one-half of the usual rate of increase. In regard to the sexes, the proportion of the inmates was 43 males to 56 females, because although there is but little difference in the total admissions of men and women, the men die sooner and the women live longer. Of the total number of the inmates under treatment, 14,991 (males 8819, females 6172) were private patients, but of this number 5,519 were ex-service men, who were permitted to wear the Sick Soldier's distinctive uniform, but many of these had previously been in Asylums before enlisting. The maintenance rate for all ex-service men is contributed by the Ministry of Pensions and not paid for out of the County funds, and their status is that of "private patients," each ex-service man is also given 2s. 6d. a week to spend as he pleases, or if he cannot, it is spent for him.

It must not be concluded that all other cases in mental hospitals (asylums) not regarded as private patients were "paupers," for most of the relatives of rate-aided cases pay something towards their maintenance in the asylums, because the Guardians collect as much as they can through the Relieving Officers towards the maintenance of every case under their care, and probably it is only a very few for whom the relatives and friends make no payment at all. It is a misnomer, therefore, and an uncharitable view to regard all the inmates of the large County and Borough hospitals as "paupers." Naturally, the patients in these hospitals are all treated alike, whether their maintenance is paid for by the Guardians or by their friends, and only when a much higher rate and separate or special accommodation is provided are they treated separately. Thus there are two kinds of private patients in these Institutions, viz., private patients whose relations pay the whole of the maintenance rate, who are private patients of the second class, and private patients

who reside in separate blocks and who pay from two to three guineas, and even more, per week; who are aptly described as belonging to the first class; but this is only a convenient and not a legal or technical classification. Sometimes the private patients who are specially or separately housed in the larger mental hospitals pay much more than the lower rates charged in licensed houses, where naturally there is more privacy and not the large crowds seen at the entertainments and at the chapel services inevitable in the larger hospitals (asylums).

The type of patients among the insane is dependent in part upon the kind of Institution in which they are housed, e.g., there is (1) the rate-aided and poorer class in the County and borough mental hospitals, (2) the private patient in (a) licensed houses, (b) in Registered Hospitals, (c) in "single care" such as in doctors' houses or Nursing Homes, and (d) those in the private or in the public parts of (1); then (3) those patients who reside in the Naval and Military mental hospitals, and (4) those who are criminals, mostly congregated together at Broadmoor, although many of these, when their term of imprisonment has expired, find themselves in (1) the large County and Borough mental hospitals and then are chargeable to the rates of their parishes.

During 1924, there were 21,303 patients admitted or re-admitted as certified insane persons; for no official record is taken of the voluntary boarders, and the proportion of fresh admissions is about one for every 1600 of the population. It is a satisfactory reflection that 7426 patients were discharged recovered during the year, a proportion of nearly 35 per cent. of those admitted for the first time. It is however a disappointing reflection that the death rate is not less than 76 per thousand, as against the general death rate—for instance in London—of 18 per thousand, showing that the mortality among the insane is more than 4 times—sometimes much more—than it is among the general population from all causes and at all ages. The nervous system is the "master tissue" and controls all the other tissues. It is incumbent upon us all to guard and protect this governing structure, upon the healthy tone of which depend all achievement, aspiration and progress.

The types of places into which mental cases are received have been already referred to in describing the types of cases and again briefly they are (1) County and Borough Mental Hospitals—approximately about 100 of such institutions; (2) Registered Hospitals—about twelve; (3) Licensed houses (private asylums) and (4) single care places—such as Nursing Homes or Doctors' houses, but no certifiable case can be taken by any one for payment, i.e., the person must be certified, which then brings the case under official control, when it is guarded, protected and officially visited.

The size of the 100 (roughly) Mental Hospitals in the country belonging to Counties and Boroughs, varies greatly according to the total numbers of the patients to be accommodated. The largest of these or about 14 in number, contain 2000 beds and over; and there are also about 14 which are equipped for less than 500 patients. The largest sized Hospitals cannot possibly permit the medical officer in charge to be in medical touch with his patients, not even with the newly admitted ones, unless he is very exceptionally interested in the medical work, and so this has to be delegated to his subordinate medical staff; and in this Report valuable hints are expressed about the appointment of medical superintendents, and the responsibilities of public bodies in regard to the efficiency of our mental hospitals; but with the best intentions and the wisest counsel and soundest advice, the success, the efficiency and the comfort of a mental hospital for its patients must depend upon the personality of the man in charge; upon him depends the happiness and contentment of the patients, and his influence for good must necessarily pervade the whole establishment, his example will be the most powerful inducement to those under him to give of their best in the service of the most afflicted of human beings. It is a tribute which the public in general owes to those who devote their lives to the insane to acknowledge their great self sacrifice and to recognise their value and worth; but probably there is no greater sense of honour and distinction than the feeling of satisfaction at having performed one's duty without expectation of reward and we believe in our heart that the service of the insane in this country is the most loyal and devoted of any in the world.

The Board emphasize the necessity for a careful classification of the patients in the great mental hospitals, thus appreciating the importance of separating the newly

admitted patients, who, in the main are the recoverable cases, from those whose recovery is improbable, and the Board wisely commend an atmosphere of recovery to be maintained in regard to all those Institutions by avoiding locked doors, barred windows and un-climbable fences for the recent cases, as also by the presence of a highly trained staff of men and women on the nursing side. To use an expression of the Board, the work of a mental hospital should "concentrate" on the effort to heal and to care for all the recently admitted patients, and they go so far as to advocate for every mental hospital some separate accommodation for these cases, both in the early stage of treatment and in the later convalescent stages whilst recovery is proceeding. They indicate that during the period of convalescence, freedom of movement is desirable for the patients, walks being permitted in the grounds unaccompanied by the "gilt buttons" of authority, "parole" being granted and patients being encouraged to observe honourably the conditions of freedom granted to them. The Board would permit freedom and liberty in these hospitals even at the risk of unexpected and untoward results; they deprecate "inelastic rules" and they suggest the full "hospital" treatment of all mental cases, believing strongly that an environment of this character, implying as it does the absence of restraint and the avoidance of compulsory detention—which all mental cases are distressed at and fear—in itself suggests "Hospital" treatment and so tends to humanize rather than repel and harden the patient who has been sent there for treatment against his will. It is an advocacy of the hospital as against the prison. Two generations ago Florence Nightingale desirous of taking the best into hospitals, visited some of the private asylums of Germany which were administered on the most devoted and self-sacrificing lines, carried these personal experiences and recommendations into hospitals for the sick in the Crimea and at home. To-day we are reversing this order and we desire the best in our hospitals for physical ailments to be introduced into our Mental Hospitals and the process is being already fully rewarded in the quiet and contentment observed as also in the increased number of recoveries.

The Report under review strongly urges an unwearied scientific investigation into the causes of insanity, which is an enormous cost to the country, and it very wisely suggests that every mental hospital should possess a small laboratory for the exploration of bedside work; as more than ever before are morbid bodily states recognised to influence unfavourably the mental state, affections of the teeth, eyes, nose, throat and ears inevitably affect mental conditions; the state of the blood, the discovery of any special virus which may impair health, the state of the heart and lungs, of the abdominal organs, the discharges of the ductless glands can all be ascertained and cleared up by laboratory methods, but the Board is lessening the cry of medical and scientific investigation when it adds "it is a waste of time for much of this work (laboratory) to be actually performed by a doctor and the medical staff should not be expected or encouraged to undertake it," this being recommended on the high authority of the Board to be carried out by a layman who should be a trained laboratory assistant. In this view of laboratory investigation we think the Board is lessening the interests of the medical work, which finds in the pursuit of laboratory details the greatest incentive to good clinical work and no emotional pleasure can equal that of personally controlling and elucidating morbid states and so unravelling the mysteries of disease, which only accurate diagnosis through the help of the laboratory can relieve. When a mental hospital is situated in the vicinity of a University it is urged that the person in charge of the laboratory should be a member of the University staff, thus again emphasizing the necessity for the so-called "hospitalizing" of the asylums. Another method of arriving at the same achievement is to suggest consulting physicians and surgeons to act on the staff of the mental hospital, which supplements the rules of all medical superintendents which already permit such consultations if they deem it necessary. The Board urge an X-ray apparatus for every mental hospital, but it may not be known to the Board that the Red Cross Association provides at short notice a travelling apparatus with a staff at call, and as the value of an X-ray picture depends upon the interpreter who is himself an expert, we think in these days of economic stress that this request for an inevitable horde of X-ray installations appears not to be a necessity, although it may be a convenience. The same, in our opinion, applies to expensive operating theatres, unless these are thrown open to the general medical practitioners in the district, which we would then heartily support.



What is mostly needed in our mental hospitals is a fully trained staff of male and female nurses, and anything which can further the interchange of members of the nursing staff of hospitals and asylums (mental hospitals) helps to secure this, but it has as yet only been possible to a very limited degree; and the mental qualities of mental nurses must always be the chief aims and needs of the mental hospitals—sympathy, zeal, compassion, devotion, the sacrifice of self to others; endurance, toleration and self-control—qualities which serve as an example to re-educate and to rehabilitate others, to re-establish correct habits of thought and conduct, these will always remain the great and important qualifications of the mental nurse, and as the work in the mental hospitals has become less attractive of late years, their surroundings must be improved and the Board of Control is fully alive to this need. They advocate new Nursing Blocks, or Homes or Hostels to be built at the Mental Hospitals so as to attract the best type of women to the work, and the male and female nurses are invited to study and learn their duties in a service which is now permanent, and generously pensionable. The Report deals with the modern treatment of bodily disorders based upon open air methods, aided by hydro-therapy radiant heat, the ultra-violet light, and electrical stimulation, but these cannot be practised without special training and long experience.

The question of the Dietary in the Mental Hospitals also receives consideration. We have for a long time urged the necessity for special supervision in regard to the *ménu* of Mental Hospitals and in some of them the *ménu* is submitted to the Committee at each meeting. We have long felt that convalescence among mental patients frequently commenced from the kitchen, i.e., that a prominent place should be given to a full, adequate and varied dietary, that good food should be nicely served and temptingly presented, to which the mental patient more than any other reacts appreciatingly, as is noted by the almost invariable increase in weight of all patients who are convalescing.

It is interesting to note the stress laid by the Board upon "After-care" treatment of the insane; for insanity, it must be stated, unlike bodily diseases, needs a period of "annealing" before convalescence is fully established. Such supervisory care is requisite for every patient discharged from the Mental Hospital, if it can be possibly secured, and in the main, it is available for the asking. It is impossible to speak in too appreciative terms of the work carried on by the Secretary (Miss Vickers) of this Association and out of 6751 patients discharged recovered during the year, 5381 of them went out after a period of "trial" or probation, the total 939 of these receiving organized After-Care treatment. We have always felt that this work should become an ancillary department of the Board of Control itself, and not left to be the support of exiguous voluntary effort. It is public work of a most difficult and important kind and it is entitled to more recognition than has heretofore been bestowed upon it. It is also work which obviously can be very considerably extended, as less than one in six cases discharged recovered has been helped by this Association chiefly owing to the lack of funds and staffs, although to a much greater extent now than formerly the mental hospital authorities help to defray the cost by contributing sums per week per patient equal to the maintenance rate paid in the Hospital.

The Board of Control call attention to five methods of discharge from (Asylums) Mental Hospitals, and in view of possible stringency of accommodation for new cases in the near future, they urge that one or other of the following methods should be adopted whenever possible, (a) removal of the more chronic and irrecoverable cases to the local Workhouses or their Infirmarys (sec. 26 Lunacy Act 1890); (b) the discharge of such cases into special Poor Law Institutions not in their district (sec. 26); (c) the discharge of cases though not recovered into the care of their friends (sec. 9); but as a matter of experience only a few friends among the poor have the room necessary for a mental patient to reside with them in their homes; (d) the discharge on the system of Boarding-out patients with monetary assistance not exceeding the weekly cost of their maintenance in the mental hospital. This is a method of discharge much more often observed in Scotland than South of the Tweed, owing to the fact that in such sparsely populated districts, the minimum of supervision which they would require is easier to carry out and those who are selected to care for them are better known to the local authorities; (e) the more frequent discharge of cases "on trial" or probation (sec. 55) than is now customary. This would probably be possible if there existed local branches of the After-Care Association which has its central bureau in London.

The cost of maintaining the insane in the County and Borough Institutions of this country is no less than seven millions a year, and if this enormous public expenditure is to be avoided, Eugenic advice must be heeded and the work of the Eugenics Education Society extended. Its creed is therefore of paramount importance to the State. The cost of maintaining each patient is on an average 22s. 6d. per week, and at present the average increase is 2,500 cases of certified insanity a year, which can only be controlled by adopting eugenic principles.

The high record of suicides, viz. 44 patients who were certified and in addition 7 voluntary boarders, is an unsatisfactory record and indicates some lack of supervision or perhaps an error in the diagnosis of mental states when cases are entrusted to skilled care. The public have a right to feel that when the insane are placed in mental hospitals valuable lives should be properly protected, but it may be excused as the penalty of granting greater freedom than can be enjoyed by some of those who are mentally deranged, although this increased freedom ensures the happiness of the greatest number, yet it is sad that valuable lives should be sacrificed to a cult. It is regretted that the death-rate from Tuberculosis should still be so high, viz., one-seventh of the total deaths, a much higher proportion than among the general population, yet the figures for 1924 were the *lowest* of any previous year. Other preventable diseases were typhoid or enteric fever, erysipelas, dysentery (or colitis) and possibly pneumonia, but the general surroundings of the insane, their food and warmth in winter are receiving increasing attention, especially is aerial contamination considered as favouring disease and the vacuum cleaner is advocated to allay dust.

A reference is made to the proposed removal of that ancient charity the Bethlehem Royal Hospital from its present site to the district of Sydenham and it is fervently hoped that the high reputation of this noble Hospital may be further enhanced in its new situation.

The rest of this Report is given to the consideration, supervision and care of the mentally defective, but the whole Report teems with interest to the social worker and it is evidence of the highest scientific interest taken in the care of the Insane. The Board of Control have been rightly described as the best friends of the mentally afflicted and this Report is a monument of their care, concern, devotion and faithful services to those who suffer from mental disease. It is expressed throughout in simple, dignified and non-technical terms and it will be widely and appreciably read by all Eugenists.

ROBERT ARMSTRONG-JONES, M.D., F.R.C.P.

Board of Education. Report of the Consultative Committee on *Psychological Tests of Educable Capacity*. H. M. Stationery Office, London, 1924. Pp. xii + 148. Price 2s.

MENTAL tests and psychological assessment generally is not only an increasingly important study ancillary to eugenics, but has for us the historical interest of being built up on work done 43 years ago by Sir Francis Galton and elaborated by Prof. Cattell first in London and then at Columbia University, in collaboration with Thorndike.

The report under review is not only an exceedingly handy summary of the considerable amount of material available, but contains some interesting notes not yet published elsewhere, which are enumerated below.

Sir Henry Hadow was chairman of the Committee who were fortunate in securing help from Prof. Cyril Burt (Historical Survey, Memoranda on London Revision of *Binet Simon* Selected tests, Oxford and Liverpool investigations (Bibliography, Appendices, IV, V, VII, VIII), Dr. C. S. Myers, Dr. Ballard and others.

Not only is this a work for the general public—a clear and careful introduction: one is also struck by the fact that it is essentially a report by non-specialists on the evidence given by specialists. Thus opposite points of view receive equal treatment, but anyone familiar with the material is almost startled to find some views generally discarded by specialists, considered elaborately and given full weight. The description of psycho-galvanic reaction suffers from such ‘amateur’ treatment, and it is curious that (amongst many instances of ‘historical’ accuracy,) its use in this country should be associated with Whateley-Smith’s name, rather than that of the physiologist who introduced him to the technique.

“General” as against specific ability comes in for prolonged discussion.

The conclusions contain some important points, which may fairly be quoted:—

“Further it is recommended that Courses be provided in Elementary Psychology and the elements of Modern Statistical Methods, to enable Teachers and Medical Officers to qualify for the use of Group and Individual Intelligence Tests.” Pp. 139—40.

A guarded pronouncement on the Possible use of Intelligence Tests as Adjuncts to Certain public examinations for young children occurs (pp. 140-2.), while ‘Vocational Tests’ are recommended for use with other data in placing entrants to industry.

The last two regard the “*Provision for Co-ordinating and Rendering available for general use the Results of Scientific Research in regard to Psychological Tests of Educable Capacity.*” (37) proposing an Advisory Committee of the Board of Education and/or Government Departments in Concert with University Departments, &c. (Pp. 144-5.)

The Committee of the American Research Associations (quoted in the report) might be more suitable to a growing science, which may still require to use methods akin to propaganda at times.

Space only allows enumeration of the Appendices which remain to be noted, and add vastly to the value of the publication. II Describes the use of Tests in England. III In other countries. IV & V. make clear “Standardisation” “Norms” and “Correlation.” VII is a Bibliography. VIII Examples of Tests. The Report has an excellent index.

C.B.S.H.

**Bridges, C. B., and Morgan, T. H.** *The Third Chromosome Group of Mutant Characters of Drosophila Melanogaster.* Carnegie Institute, Washington, 1923. Pp. X+251. Plates and Figs.

OF the 400 odd mutant forms which have appeared in *Drosophila*, the large groups located in the sex-chromosome and in the second chromosome, have been described in previous publications of the same series (No. 237, 1916, and No. 278, 1919). The present memoir describes the 91 mutants located in the third chromosome.

For each mutant is given a description of its occurrence, a diagnosis, and a careful evaluation of its value for further genetical research. The actual crossover data is listed in a statistical table. No attempt is made in this volume to discuss the full genetic and evolutionary significance of this fundamental work, but valuable short summaries such as that on Beaded (pp. 37-44), give a good idea of the range over which these results may be applied to genetic problems presented by other species. The whole is a most valuable work of reference, which every reader of recent genetical literature will wish to have by him.

R. A. FISHER.

**Browning, William.** *Medical Heredity. Distinguished children of Physicians, United States to 1910.* Baltimore: The Norman Reprinting Co., 1925. \$4.00.

THIS is a work of the most exhaustive research, tabulating no fewer than 6,500 men and women of distinction, children of members of the medical profession in the United States, excluding those who themselves followed that profession. Practically every walk of life is represented among the 6,500 but as might be expected purely intellectual persons are more noticeable than those dependant chiefly on push and energy, or on oratorical talent. Commercial men and public speakers do however both figure to some extent. A few of the most notable names may be given. Presidents Benjamin Harrison and Warren Harding; the diplomats, Joseph Choate and John Hay; Joseph Story the judge, William Ellery Channing the preacher, George B. McClellan the general, Wm. Cullen Bryant the poet, James Freeman Clarke the theological writer, Madison Grant the sociologist, John S. Sargent the painter, and John D. Rockefeller the commercial magnate). The high water mark in public affairs was reached some sixty years ago, when practically all President Lincoln's leading advisers were the sons of medical men.

As a result of his researches the author is of opinion that little or nothing depends on either the age of the parents or on the order of the child in the family.

Some interesting tables of consecutive generations of medical men are given,

the longest being the Porter family with eight. Curiously enough not one of these long lines has produced any specially eminent man.

Extremely instructive statistics are included as to the proportion of children of medical men appearing in the American Who's Who for 1920. These number 846 (at least) out of a total of 16,027, or  $5\frac{1}{2}\%$ . How does this compare with a proportion of the whole population? It would seem that in England and Wales medical men on the register are about 1 in 500 of the total adult male population between the ages of 25 and 70, and the proportions would no doubt be very similar in the United States. 1 in 500 is  $\frac{1}{5}$  of 1%, whereas the proportion of children of medical men in Who's Who in America works out as has been seen at  $5\frac{1}{2}\%$ . The chance of distinction for the son of a medical man is therefore about 27 times as great as that of an individual taken at random, a fact of great social significance. In all probability researches, similar to those of Dr. Browning, in connection with the clerical and legal professions, would yield somewhat similar results, and such researches if they could be undertaken, should prove of the utmost interest and value.

W.T.J.G.

**Graham, Margaret V.** *A Common-sense Treatise on Birth Control.* John Bale<sup>s</sup> Sons and Danielsson, Ltd., London. Sixpence.

THIS little book sets out to tell in simple language, facts in the sexual life of men and women, which should be known to everyone, at a suitable age. It also summarises the various devices used in contraception. When such a treatise exists, well within the means of everyone, even the poorest, one wonders why so much ignorance still seems to abound. It cannot be lack of curiosity, that prevents enquiry at the nearest booksellers.

H.C.C

**Graves, W. W., Prof.,** of Neuro-Psychiatry, St. Louis University School of Medicine.

*The Types of Scapulae*, American Journal of Physical Anthropology, 1921.

*The Relations of Scapular Types to Problems of Human Heredity, Longevity, Morbidity and Adaptability.* St. Louis University School of Medicine.

*The Age Incidence of Scapular Types. Its Possible Relation to Longevity.* Association of Life Insurance Medical Directors, 1924.

*The Modes of Recognising Scapular Types in the Living.* Archives of Internal Medicine. July 1925. Vol. 36, pp. 51-61.

THE consideration of a series of over 21,200 observations on living and dead scapulae, has convinced Dr. Graves that there are three types of scapulae, recognisable by the character of the vertebral border of the bone from the level of the scapular spine to the inferior angle. That border, within the limits indicated, is either convex or concave towards the vertebral column or it is straight.

The character appears at the tenth week of foetal life and persists until death, being in no way influenced by nutrition, disease or environment.

The character is transmitted from parents to children. Convex+Convex produces convex. Concave+Concave produces concave. Convex+concave tends to produce concave or straight.

The condition is, therefore, due to "heredity" and indicates the potency of hereditary factors and the impotency of environment even in the production of bone form.

Apparently, however, as Dr. Graves suggests, it indicates also something more, for the scapulae with concave and straight vertebral borders, taken together and reclassified as "Scaphoid Scapulae" are, to the scapula with convex borders as 4 to 1 at birth. The proportion alters, as age advances, until at the eightieth year it is totally reversed, and the convex are to the scaphoid as 4 to 1. Further in the insane and the tuberculous the proportion of scaphoid to convex scapulae is greater at any given age period than it is in a normally healthy group of similar number.

The inference which Dr. Graves draws from the facts he demonstrates is that there appears to be some association between scaphoid scapulae and a condition of physical inferiority. He does not assert that they are necessarily concomitant, but states that they are frequently combined.

Anyone who studies Dr. Graves' data will arrive at similar conclusions, and will realise, at the same time, that in spite of the amount of work done there is, as yet, no indication of why a condition of physical inferiority should produce a scaphoid scapula.

ARTHUR ROBINSON.

**Hart, Hornell Norris.** *Differential Fecundity in Iowa.* University of Iowa Studies. June, 1922.

THIS monograph contains a wealth of statistical material relating to the fecundity of various classes in Iowa. The fecundity index is taken as the number of children under 5 years of age per 1,000 women of 21-44 years of age, and by the exclusion of a great part of the infantile mortality this index measures effective fecundity more nearly than use of the birth rates would do.

This index is considered in relation to (a) percentage of population living in towns and cities (b) age distribution of women; (c) number married per 1,000 females; (d) education; (e) house ownership; (f) religion; (g) nationality. Of these variables (a), (b) and (c) account for the greater part of the variation in the fecundity index. Urban people have fewer children than those in the rural districts and married women naturally have more than unmarried. Steepness of the age distribution is correlated with the high adult female death rates which are found in the poorer population, and the same people have high birth rates. Through the poverty correlation secondary correlations exist with a low house ownership index, a low education index and a high foreign nationality index. In a word the poor and ill educated are the highly fecund class, while those having the least fecundity are the successful native born and highly educated city dwellers. Since infant mortality is greater in the poorer classes, probably even more striking correlations would have been obtained if birth rates could have been used, but even so the author concludes that "These differences in fecundity are so radical that they cannot fail to have a profound effect upon the types of children produced, upon the sort of house and community environment provided for them, and hence upon the trend of character of the Iowa population."

A. S. PARKES.

**Hoffman, Dr. Hermann.** *Über Temperaments-Vererbung.* From a series edited by Kretschmer. Published by J. F. Bergmann, Munich. 1923. Pp. 68.

THIS enquiry into Temperament inheritance consists of four parts. In the first part the author considers the crossing of asthenic and sthenic types following out Kretschmer's scheme. Specific families are considered, and the parents' personalities analysed to ascertain what the effect of the crossing is in the children. Most interesting and instructive cases are discussed in very full detail. The author adopts the contrary procedure in part two. Beginning with individuals of markedly different types, he seeks to relate their characteristics to those of their parents. Much valuable and illuminating data is presented, and many interesting case histories are traced out. The third part is more general in nature in which the inheritance of individual temperamental characteristics is considered in reference to genealogical trees. It is clearly shown how a temperamental trait may pass over one generation, but may appear in definite form in the following one. Finally, the reversal of some psychical sex characteristics is briefly discussed.

In concluding, one point is emphasised, namely, that we are not yet in a position to apply definitely and scientifically Mendelian principles to the inheritance of temperament, because we are dealing with complex characters.

The whole enquiry is a most interesting contribution to temperament study.

M. COLLINS.

**MacAuliffe, Leon, M.D.,** Directeur-Adjoint du laboratoire de psychologie pathologique à l'école pratique des hautes études. *Les Mécanismes intimes de la Vie.* Pp. 85, with 48 illustrations. Price 18 francs. Librairie Scientifique Amedée Legrand, Paris, 1925.

THIS is a charmingly written and lucid book but its bearing on Eugenics is remote. It is a disquisition on the theory that protoplasm consists of colloid solutions, and it gives a popular account of the chemical and physical consequences of this theory. What is especially emphasised is the enormous total area of the surfaces exposed by the colloid particles and the consequent opportunity afforded for chemical and

physical reactions between the particles and the encompassing liquids. It is pointed out that a colloid solution readily passes into a state of semirigidity known as a gel and that the more solid portions of the human frame (apart from bones) are composed of these gels. The gels possess according to their chemical constitution varying powers of absorbing water; and Mac-Auliffe arrives at the extraordinary conclusion that the different types of human figure are due to the different capacities of their constituent gels to absorb water. In illustration of this a number of illustrations showing nude persons of both sexes are given. But surely the author forgets that the adepository or slenderness of a figure is in large measure due to the accumulation of a definite chemical compound, viz., fat (stearate of glycerine) and not to greater or less degree of the "wateriness" of the tissue—the tissues of a dropsical person certainly absorb water and give rise to a figure resembling that of a fat person but the cause in the two cases is radically different.

E.W.M.

**Oppenheimer, Reuben, and Eckman, Lulu L.** *Laws Relating to Sex Offenses Against Children.* Government Printing Office, Washington. 1925.

IN this publication issued under the auspices of the Children's Bureau, information is presented in index form of the various laws relating to criminal offences against children, in different states of U.S.A.

H.C.C.

**Rohleder, Dr. Hermann.** *Monographien über die Zeugung beim Menschen.* Band I. Normale, pathologische, und künstliche Zeugung; Band II. Zeugung unter Blutsverwandten, 3 Verbesserte Auflage. Leipzig: Georg Thieme, 1924. 8vo. Pp. 336. Mks 9.60.

JUST as eugenicists have always urged that a man's character is determined at his conception, so it may be said that the character of a text book is determined once and for all by the time and circumstances of its conception. A man's subsequent education and training may put on a veneer, but it cannot alter his fundamental disposition. So it is with a text book. Subsequent editions may here and there bring it up to date in points of detail; but its fundamental character, its plan, and scope, and principal thesis, is determined by the ideas which are current at the time when the author conceives the idea of writing the book.

The volume before us is a case in point. Though dated 1924, this third "*verbesserte*" *Auflage* bears the indelible stamp of the original edition which appeared, we should guess, twenty years ago, when Mendelism was an unimportant and isolated occurrence concerned only with dominance, when telegony was still regarded as an accredited phenomenon, when hormones were in their infancy, and the so-called "blood" theory of inheritance held full sway.

We have heard much in recent years of the difficulty of publishing scientific memoirs in post-war Germany. In these circumstances, it seems a pity that so much type and paper should have been employed in printing a new edition of a work old enough to be out of date without yet being sufficiently antiquated to be of historical interest.

M.S.P.

- (a) **Sax, Dr. Karl.** *The Nature of Size-Inheritance.* Proceedings of the National Academy of Sciences. Vol. 10, No. 6. 1924.
- (b) **Sirks, M. J.** *The Inheritance of Seed Weight in the Garden Bean.* *Genetica.* Vol. VII. 1925.

THE inheritance of size is generally "explained" by means of multiple factors, though usually no attempt can be made to isolate and identify by breeding experiments the action of any one of these postulated factors. But if in most species a large number of independent size genes do in fact exist, sooner or later we should come across linkage relationships with other easily recognisable genes, which should help us to define and identify some of these size factors.

*Phaseolus vulgaris* provides a case in point, so far as we are aware the only example as yet known. This plant, already famous as a result of Johannsen's classical experiments, seems likely to be going to throw light on a new aspect of size inheritance. Dr. Karl Sax in America and Dr. M. J. Sirks in Holland have experimentally established a most interesting association between colour and size

in the seeds of this plant. Dr. Karl Sax believes that this is due to linkage between the colour gene P and one of the presumed multiple factors for size, G. Dr. Sirks, however, sees the explanation in terms of linkage between the recessive allelomorph p and a supposed inhibitor factor I, which works in the opposite sense to that of the postulated cumulative size factors. Dr. Sirks' extremely illuminating discussion of the available data shows how easy it is to gerrymander multiple factors and linkage relationships to suit a variety of hypotheses (though it does not necessarily follow that therefore linkage and genes are useless conceptions for expressing the results of cross-breeding). Further breeding experiments with this plant will be followed with great interest, in the hope that more linkages will turn up, which will enable some of the unknown quantities in this problem to be evaluated.

M.S.P.

**Seton, Ernest Thompson.** *Lobo.* Hodder & Stoughton. London. 1925. Pp. 125. Price 2s. 6d. net.

THIS is just one more of Mr. Seton's very welcome books of animal stories. Only a real naturalist appreciates to the full the value of these bits of work, although the fascination of the stories is general, for no studies that we have give a better inside picture of what is technically called *Bionomics* than these careful field-studies.

In the present book the pressure on different species, particularly of the carnivores, of man's encroachments with their subsequent extermination, is very clearly shown.

Another biological point of great interest, which Eugenists would do well to read, mark and learn, is the evidence which he gives of a wide range of variation in capacity and adaptability within a species. The Wolf hero, and the Partridge hero are equally particularly highly gifted and adaptable units, and their success in the struggle emphasises well the value of natural selection in producing and maintaining a high average in every race in which it operates.

The letters which have recently been appearing in *The Times* on the frequency of the fox feigning death, make very interesting reading alongside of these other wild nature tales. Foxes have maintained a steady small population by adaptation to the neighbourhood of man. They find a ready prey in the domestic birds with which he surrounds himself, but that species which inherits the instinct for the death-feint, an exceedingly rare occurrence amongst the carnivora, is characteristic in the surviving race.

C.B.S.H.

**The National Baby Week Council.** *Some Maternity and Child Welfare Problems.* London. 1s. 1925.

THIS is a report of the lectures and discussions at the summer school of maternity and child welfare held in 1925. These include lectures on the Physiology, the Psychology of the normal infant, on the expectant mother, on maternal mortality and the social problem. In the round table talks there was much discussion on the necessity or otherwise of imparting contraceptive information at the official infant welfare centres.

H.C.C.

**Tolman, Edward Chace.** *The Inheritance of Maze-learning in Rats.* Journal of Comparative Psychology. Vol. IV. No. 1. Feb., 1925.

THIS paper goes at length into the mathematical difficulties of a fair assessment of maze-performances. The results of this first enquiry gave distinctly better performances in F1 by the offspring of 'bright' than of 'dull' pairs, but in F2 the performances were poorer in the 'bright' group than that of their parents (i.e., 'bright' F1.) The paper is admittedly inconclusive and further work is promised.

C.B.S.H.

**Vaerting, Dr. M.** *Wahrheit und Irrtum in der Geschlechtspsychologie.* G. Braun, Karlsruhe, 1923. Pp. 254.

THE author seeks to show that much which to-day passes as exact knowledge in the psychology of man and woman is vitiated by a failure to recognise (1) the profound suggestive force of established custom and tradition, and (2) the 'sex-component' within each of us which makes our emotional reaction towards the opposite sex

different from that towards the same sex. Thus he counters the generally accepted view of men doctors, that women stand pain better than men, by citing the opinion of women doctors that men stand pain better than women. He finds in the egregious utterances of German Professors during the war plenty of evidence that objectivity and "sachlichkeit" are by no means universally male attributes. To an Englishman, perhaps, the most interesting thing about the book is its sidelights on German character. One illustration will suffice. To an upper class of school boys he set as an essay subject "Was ist höher zu werten, Mut oder Gehorsam?" and they all answered in favour of obedience.

M.S.P.

**Vajkai, Julie Eve.** *Child Saving and Child Training.* Published by The World's Children, Limited, London.

This is a most humanly interesting document about the work-schools established in Budapest by the Save-the-Children Fund. The difficulties of organisation and the economic conditions existing made a problem which must have required all Miss Vajkai's energy and ingenuity and patience. That she seems to have succeeded, one is left with no doubt, after reading the story of this work school. Children of 12 upwards were trained in crafts, and while learning they received a little pay for their work, but more important than the actual handicraft learned, seemed to be the pleasure in work done, not the actual pay received for it. The slogan of the school might well be adopted by many: "the only honourable way to gain profit is by work."

H.C.C.

**Wolf, A., M.A., D.Litt.,** Professor of Logic and Scientific Method in the University of London. *Essentials of Scientific Method.* Pp. 158, price 5s. George Allen and Unwin. London, 1925.

This book is an analysis of the methods used by scientific men in arriving at their conclusions. The author is a literary man without scientific training and it is difficult to know to what class of readers the book is addressed. Scientific men certainly do not need it, nor is there anything specially recondite about their methods; these as Huxley pointed out consist simply in organised common sense. Non-scientific readers would learn more about scientific method by studying a little science than from the disquisitions of this book. But the author is to be praised for the clear exposition which he gives of the shortcomings of the statistical method and of the dubiousness of conclusions based on statistical evidence only. Not without reason did Lord Balfour once define the three grades of terminological inexactitude, viz., "lies, damned lies, and statistics."

E.W.M.

#### PAMPHLETS.

- (a) **Gowen, J. W.** *The Application of the Science of Genetics to the Farmers' Problems.* *Scientific Agriculture*, Vol. V. No. 1. 1924.
- (b) **Gowen, J. W.** *The Inheritance of Milk Production.* *Scientific Agriculture*, Vol. IV. No. 12. 1924.
- (c) **Gowen, J. W.** *Intra uterine Development of the Bovine Foetus in Relation to Milk Yield.* *Journal of Dairy Science*, Vol. VII. No. 4. 1924.
- (d) **Gowen, J. W.** *Interpretation of Dairy Pedigrees.* Annual Report of the Maine Agricultural Experiment Station. 1924.
- (e) **Gowen, J. W.** *Conformation and Milk Yield.* Annual Report of the Maine Agricultural Experiment Station. 1923.

To every intelligent person it must be clear that ultimately all progress in Agriculture depends on the application of the results of scientific research to the practical problems of husbandry. And the country which spends money generously and wisely on research into the basic problems of Agricultural Science will in the long run reap the reward. And when we consider that this country spends not one penny on research into the genetics of the larger farm animals, while America, Germany, and the Scandinavian countries spend liberally, we may well have grave doubts as to whether British livestock breeders will be able to retain the old pre-eminence which they have enjoyed for more than a century. And, be it



noted in passing, pedigree live stock breeding is that branch of Agriculture which has always been profitable, even in the most gloomy years of agricultural depression.

In these days of economy in education and research, it is scarcely likely that the chancellor will look with favour on a project to spend money which may possibly bring a material return in 30 or 50 years' time. If our politicians thought in terms of the next generations, rather than in terms of the next general election, we might find a different spirit at the Treasury. What money we do spend on Animal Breeding, goes in the form of stud schemes, and of premiums for bulls and cows. All this is to the good. It continues the process of levelling up British Live Stock to the standard of the best. But no one can regard this as pioneer work. There is no new method or principle brought into action. We can expect from it no great step forward, such as resulted from the epoch making experiments of the classical breeders in the eighteenth century.

America has realised more quickly than we the material value of scientific research, and it is to America that we turn for revolutionary experiments in Animal Breeding. To Dr. J. W. Gowen belongs the credit of having planned and started a bold experiment in cattle breeding. Is it possible by crossing a beef breed with a dairy breed to produce the real dual purpose cow? By a singular irony this is a matter of little or no practical consequence to the American, but it is one of the very greatest pecuniary importance to the British farmer. Dr. Gowen's experiments will therefore be watched with the greatest interest by breeders in this country.

As every experimenter will realise, the problem is vastly more complicated than it might at first sight appear. All sorts of preliminary questions have to be answered. What exactly constitutes a dairy cow? How is milk yield inherited? Is high milk yield ever homozygous? What, after all, do we mean by the 'milk yield' of a cow? Can we evaluate the factors (apart from the genes) which control it? Is there any connection between milk yield and butter fat content? How far does inbreeding effect milk yield? How far is external conformation a guide to milk yield? All these (and many other) questions have to be cleared up before we can get down to the genetics of the problem.

Of the papers before us, (a) deals with the general problem on lines familiar to readers of this review; (d) which seems to be a reprint of (b) in a rather more handy format, points to the conclusion that in-breeding, as ordinarily practised, has little effect on milk yield, that famous ancestors, if remote are of no influence, but that parents, grandparents, and sisters are important relatives on which to base an estimate of the productive worth of an animal. The paper (e) is an account of a test of 19 famous cattle judges who were asked to select by eye the good milkers out of a mixed herd of Jersey cattle in which the individual milk records were known; and the judges came out of the ordeal with reputations so woefully shattered, that Dr. Gowen has wisely concealed their identity!

It is to be hoped that Dr. Gowen's preliminary publications (of which the above constitute only a small and unimportant fraction) will stimulate the interest of British breeders to realise that this is the sort of fundamental work in applied genetics which we ought to be doing in this country to-day. They are experiments, too, which would be of great interest and guidance to Eugenists. We cannot expect the commercial breeder with his eye on the South American market to dabble in cross-breeding. It is admittedly a gamble—but just the sort of gamble which the Ministry of Agriculture ought to undertake.

M.S.P.

#### PERIODICALS.

*The American Journal of Hygiene.* Vol. V. No. 2. March, 1925. (Place of publication not stated).

F. J. Netusil discusses "*The Movement of Birth and Death Rates in Bohemia.*" Attention is called to the fact that whereas during the nineteenth century up to about 1870 or 1875 the birthrate remained at about the same level; after this date there was a progressive decline which has lasted till the present time. The decrease in death rate curve began about ten years later. The author has calculated mathematical expressions for these curves, and suggests that the basis of the change must be biological. The two curves are by no means identical and about 1900 the rate of decrease of the death rate curve was much greater than the rate of decrease of the

birthrate curve. In the future it may be expected that the two curves will again diverge from one another.

In this study the author has neglected the periodicity which I have shewn in this Journal occurs in most, if not all, birth and death rate curves and concentrates on the general slope of the curve. The phenomenon recorded for Bohemia is extremely general in most countries for which accurate data are available, in other words for civilised countries. It is a remarkable fact that apart from ups and downs the population whether of man or of any given species of other living things in any given area remains as far as we know fairly constant. That it cannot always do so is clear from the fact that some species become extinct and new ones arise. In man Carr-Saunders has shewn that in England the population is constant till the industrial revolution and then it bounds up. Now we are at a period of decline. But this decline is so world wide a phenomenon that it deserves a very careful study on the part of biologists. To some it is a phenomenon which suggests the ultimate overthrow of the "White" races by the "Coloured." To others it is rather part of a periodic wave in the population. The high level of increase in the population of Europe during the first part of the nineteenth century is an unparalleled event in human history as far as we know, although possibly some of the great ethnic movements of history may have been due to similar causes. In any case it seems to be primarily a biological problem and it is to be hoped that the author of this all too brief paper will analyse the curves of other countries (Sweden and Finland for instance offer long series of observations) and compare them with those of Bohemia. It is certain that the facts he suggests are widely spread and as we cannot experiment with man our only method of attacking the problem is to use comparative material.

L. H. DUDLEY BUXTON.

*Archiv für Rassen- u. Gesellschafts-Biologie.* Vol. 16. 1924. Über einige Versuche, bei Säugetieren, das Zahlenverhältnis der Geschlechter zu beeinflussen. Agnes Bluhm.

This paper is an account of interesting experiments on the effects on the sex-ratio of the administration of alcohol, yohimbin and caffeine to mice. Bluhm found that the births from normal stock mice gave a male percentage of 44.38 and an average litter size of 4.94. The matings in which the males were treated, however, all produced an excess of males. In the case of those receiving alcohol 67 litters containing 331 young were produced, of which 182 were male and 149 female. This gives a male percentage of 54.98, and an average litter size of 4.94. Thus the male percentage was materially increased without the fertility being altered. Forty-six male mice treated with yohimbin and mated with normal females produced 185 male and 154 female young, a male percentage of 54.57. Treated females, however, mated with normal bucks produced 256 offspring which showed a normal ratio between the sexes. The administration of caffeine produced much the same effects. The treated bucks produced 350 young with a male percentage of 53.71, while treated females produced 322 young with a male percentage of 45.35.

From the fact that treatment of the male resulted in derangement of the sex-ratio, while treatment of the female had no such result, Bluhm justifiably considers that the experiments afford strong support to the hypothesis that the spermatozoa in mice are the effective agents in determining the sex of the embryos, and that to this end the spermatozoa are dimorphic in constitution. He further supposes that the female producing spermatozoa are less able to withstand the adverse conditions brought about by the treatment than are the male producing; a supposition which is supported by other evidence.

This work is of considerable importance from the point of view of the study of the factors governing the sex-ratio and is of the type which it is to be hoped will eventually lead to a considerable knowledge of means by which experimental alterations of the sex-ratio may be produced.

A. S. PARKES.

*Archiv für Rassen und Gesellschaftsbiologie.* Band 16. Heft 2. Oct., 1924. München, Verlag Lehmann.

This number contains a reprint of a lecture entitled "Ueber rassenhhygienische Familienberatung" by the distinguished mental specialist Dr. Ernst Rüdin, delivered under the auspices of the Munich Eugenics Society to an audience more or

less unconverted. It therefore necessarily traverses ground already all too familiar to readers of this journal. Prof. Rüdin looks at the problem more especially from point of view of mental diseases (which he is careful to point out cannot be lumped together genetically) and his illustrations are drawn from his own practice and wide experience in this department. He is in favour of obligatory health certificates before marriage, but rightly emphasises that eugenic progress cannot be brought about by legislative interference until the eugenic moral sense is far more widely held than it is at present, till the contamination of good stock with obviously bad stock is regarded by Society with the same horror as incest is to-day. One legislative proposal Prof. Rüdin suggests as immediately practicable, namely, the legalisation of artificial abortion when the operation is performed for eugenic reasons.

M.S.P.

*Birth Control News*. Vol. IV. No. 2. Sept., 1925. Published by the proprietors at the Mothers' Clinic, London.

The reason given in this number of the *Birth Control News* for the refusal of the Ministry of Health to permit information to be given at Welfare Centres to mothers about contraception, is a quotation from Sir Arthur Newsholme that "Doctors attached to the centres cannot be trusted to give the right advice!" . . .

A report is printed of the address by Professor Carr-Saunders on "the History of the Limitation of Numbers." Judge Cluer would appear to have raised a storm of controversy amongst the Roman Catholics by his recent reference in his court to Birth control. Included in this number are reports of the Eugenics Education Society's annual meeting at which Major Darwin made some outspoken remarks on birth control problems, also of the session of the Liberal Summer school held at Cambridge, where the question of discussing sex problems came up.

Extracts are given of the pamphlet issued by the Society of Friends, entitled "Marriage and Parenthood—the Problem of Birth Control," showing that the Quakers do not condemn artificial limitations of the family.

New Zealand is reported as having established a 'Eugenic Board.'

H.C.C.

*Birth Control Review*. August, September, November and December, 1925. The American Birth Control League, New York City, U.S.A.

The August number of this live journal, edited by Margaret Sanger, contains items of news of Birth control activities in England for one week, first week of June, at a congress on Public Health, a meeting of the National Council of Public Morals, a conference of Labour women, and most significant of all the publication of a pamphlet by the Society of Friends, in which it does not rule out discussion and spread of knowledge of contraception. It also contains three articles on Birth Control from the pens of medical women. It seems a pity that the advocates of contraception in our own country are not more strongly represented on the medical side. One feels that Birth Control might have gained a stronger appeal if it had been publicly acclaimed by woman doctors, rather than by sociologists and pure scientists and philosophers. But the feminine representatives of the medical profession seem to have been brought up on the same conservative diet as the male members.

The September review publishes an answer to Gandhi's article in 'Young India' advocating self-control rather than artificial birth control, in which his chief opponent, Professor Karve is quoted. There is an extremely spirited reply by Professor East to Count Cippico, an Italian senator, who, in an address given in Williamstown, Mass., demanded a return to the U.S. former liberal immigration policy, in order to solve Italy's surplus population problem.

In the November number of this journal fragments of a paper by Dr. Sigismund Freud on the Sexual Enlightenment of Children are given, which will no doubt arouse much controversy. Miriam Van Waters in her article says that "Delinquent children are often unwanted children." N. S. Phadke heads his title 'Eugenics for India' and gives Birth Control due prominence in his proposals.

The December review prints on its frontispiece a statement from Rabindranath Tagore, to the editor taken from a letter approving of the work of the League. Malcolm H. Bissel begins a series of articles entitled, 'Malthus, Right or Wrong,'

in which he summarised recent scientific findings in regard to the basis of the World's food supply. Harold Cox discusses the "Attitude of Theologians towards Birth Control."

H.C.C.

*Bulletin de la Société des Formes Humaines.* 3me Année, 1925. No. 1. Paris: Librairie Legrand.

This number of this valuable journal contains several papers of interest to Eugenists. Of these the most important is one by Professor Lundborg, of Upsala, who addressed a joint meeting of the Eugenics Education and Anthropological Societies last spring. The paper in question (*Eléments essentiel de la Race qui forme une partie de la Nation Suédoise*) is to a large extent a repetition of this lecture and as such will be welcomed by Eugenists.

Lundborg begins by distinguishing clearly between a nation and a race. A race is natural unity, the members of which agree in the possession of certain common physical and mental traits: a nation is a mosaic of various races bound together by a common culture. Lundborg discriminates three main races in Sweden, viz., the Nordic, the Finnish and the Lapp. Scandinavia has often been regarded as the typical home of the Nord and it is disconcerting to learn that the highest proportion of pure Nords in any part of Sweden does not exceed 18 per cent., but "long-heads," i.e., Nords, contaminated by mixture with other races from 80% of the population. The Finnish race is characterised by rounder heads, coarser features than the Nords, rather shorter stature, light brownish hair and greenish gray eyes. The Lapps are stunted with dark brown eyes and black hair. There are in addition small infiltrations from Walloon in the South and Jews in the centre.

Prof. Lundborg also contributes a paper entitled "Histoire de la lignée d'un fermier Suédois au point de vue biologique." This is a most interesting study of the hereditary transmission of a pathological condition of the nervous system known as "myoclonic epilepsy" through several generations. The condition manifests itself in intense excitability leading to violent convulsions as the result of slight stimulation. It begins about the age of 7 or 8 and the afflicted person—in extreme cases unable to feed himself and confined to bed) rarely attains 30 years of age. Lundborg strives to show that the disease appeared in the descendants of a man who was probably a heterozygote (the original farmer) and a woman (his wife) who was free from the taint, and that all cases of this malady occurring in Sweden can be traced back to this source. He strives to prove that the affliction is inherited in a Mendelian manner (which is probably true) but the numbers he gives are far too small to substantiate the Mendelian ratios.

A paper by O. Montelius entitled "Que furent les premiers occupants de la Suède" is also of much interest. The author points out that 15,000 years ago Sweden was covered by an ice-sheet and that the first men who entered it as the ice-sheet retreated were the Aurignacian ancestors of the later Nordic race. The Finnish and Lapp races came in from the east at much later periods.

E.W.M.

*The Contemporary Review.* January, 1926.

Contains an article by L. St. Clair Grondona, *The All British Continent*; which summarises concisely and clearly the economic possibilities of Australia and asserts (largely from the writer's personal experience) the suitability of all parts of the Continent for white habitation and white work. Due emphasis is laid on the racial and cultural value (by tradition) of racial unity; and a strong plea is made for further British Colonization under the Selective Conditions that the unaided enterprise of the immigrant inevitably entails.

C.B.S.H.

*Eugenical News.* September, 1925.

A communication from Professor Victor Delfino describes the position of eugenics in Argentina. There is an Argentine Eugenical Society founded in 1918 and details are given as to periodical and other publications relating to eugenics

October.

Some details are given of eugenic propaganda in the form of "fitter families contests" which have recently been held at three state fairs. These have been

popular and arrangements have been made to hold similar contests at seven state fairs in the autumn. There are also eugenic exhibits. Outside the eugenics building lights flash at intervals. One light flashing every fifteen seconds tells visitors that \$100 of their money goes to support the defective. There is a "Mendel Theater." Andalusian chicks appear at appropriate moments in the expected proportions and illustrate the principles of heredity.

The Supreme Court of the State of Michigan has declared the sterilization law of 1923 constitutional. A list is given of nineteen legislative or judicial acts of primary importance relating to sterilization that have occurred since January 1922. Up to that date a complete record of such acts is contained in Dr. Laughlin's well-known book.

Vol. X. December, 1925.

An account is given of the work of the Race Biological Institute in Tübingen which is under the direction of Professor Adolph Basler. It originated in 1924 and was endowed by Herr Nehmann, a Publisher, in Stuttgart. The Institute is part of the University.

Professor H. F. Perkins, of the Department of Zoology of the University of Vermont gives an account of a eugenic survey that is being carried out in Vermont. Attention is at present being concentrated on the inmates of five State Institutions. It is proposed to make a mental examination of the inmates and prisoners in all of the Institutions. The next step will be an investigation by means of intelligence tests of school children in four representative areas: (1) a city community, (2) a railroad centre (3) a rural area and (4) a sparsely populated mountain area.

Another note gives some account of the Battle Creek College which has grown into an institution with six hundred students over which Dr. Paul Voelker presides. The primary object is stated to be the teaching of "the Principles of Race Betterment and Biologic Living."

Accounts are given of meetings of the Eugenics Committee and of the Galton Society.

A.M.C.S.

*Genetics*. Sept., 1925. Vol. 10. No. 5.

E. W. LINDSTROM. *Linkage relations of yellow pigment in maize*. The yellow factor  $l_1$ , previously known in maize, appears best in the seedling stage in plants which would otherwise be white, devoid of or deficient in chlorophyll. It may also be demonstrated in mature plants of the *Japonica* type of striping common in ornamental maize varieties.

The present paper gives a demonstration that  $l_1$  is linked with the white albino factor  $w_2$ , a conclusion which had been inferred theoretically from the fact that both are linked with the aleurone colour factor  $r$ . Lindstrom gives the crossover percentage somewhat confidently as within a few points of 22%, but the ratios are evidently much disturbed by the bad viability of some of the albino seedlings, and it would not be surprising on the data here presented if the true value proved to be over 30%.

The second yellow factor  $l_2$ , now reported for the first time, only shows on otherwise green plants, and is masked by albinism. It is therefore entirely different in its physiological action. It is interesting that  $l_2$  belongs to the same linkage group as  $l_1$ . It is distant about 36 or 37% from the aleurone colour factor  $r$ . The method of averaging used by Lindstrom in tables 4 and 5 gives too low values, and introduces a discrepancy, 33.9 against 35.4, between two sets of data which are really in perfect agreement, the values calculated directly being 36.85% and 36.45%.

The genes of this group fall in the order  $l_1$ — $r$ — $w_2$ — $d_f$ — $l_2$ , and the fuller publication of linkage data will be awaited with interest.

Y. IMAI. *Linkage in the Japanese Morning-glory*. Imai reports two new cases of close linkage, of about 1% crossing over in the Morning-glory. The observations serve to explain a case formerly misinterpreted by Mayazawa. The number of cases of linkage now known in this plant is more than twelve.

*Genetics*. Vol. X. No. 4. Nov., 1925.

A start is made with the genetic analysis of the tomato, by E. W. Lindstrom. Of the four factors dealt with D (dwarf) and P ('peach' or pubescent fruit)

seem to show complete linkage, no crossovers having yet occurred; the remaining two factors for yellow flesh, and for colourless skin are inherited independently, thus establishing 3 linkage groups, out of the 12 theoretically possible.

Three papers deal with further work on seed and seedling characters in maize; the importance of these characters being that sufficiently large counts can be made to give statistical validity to the linkage studies. M. Demerec deals with 5 factors causing defective chlorophyll development resulting in the "pale green" seedlings which can be obtained from most commercial varieties. One of these  $Pg_2$  was found to be linked with D (dwarf) with about 32% crossing over, a second,  $Pg_3$  is linked with  $B_n$  (brown aleurone colour) with 4.5% crossing over.  $Pg_4$  is not linked with W (waxy endosperm), with either the aleurone colour factors C and R, with A (anthocyan pigment), with L (liguleless leaf), with Y (yellow endosperm), or with  $S_u$  (sugary endosperm), and therefore possibly establishes a new group. The other two "pale green" types have not yet been tested for linkage. In a second paper J. B. Wentz establishes linkage between De (Sweet defective) and  $S_u$  (sugary endosperm). A third paper by R. A. Brink discusses certain irregularities in mendelian ratios in maize, which appear to be principally due to unequal rate of pollen tube growth, influenced by at least two mendelian factors of which W is one.

In the only paper on animals F. B. Hanson and P. Heys describe the effects of heavy doses of alcohol vapour for 10 generations on inbred white rats; in spite of previous suggestions to the contrary it is found that no significant effect is produced on the sex ratio incidentally it is pointed out that the results claimed by Stockard with guinea-pigs are not statistically significant, and it is concluded that neither fowls, rats nor guinea-pigs show any such effect.

R. A. FISHER,

*Hereditas*. Band V. Häft 2. Lund, 1924.

Dr. J. Bashuus-Jessen in an article entitled "some remarks on the Principles of inbreeding" comes to the conclusion that "Cross-back" mating results in a closer degree of inbreeding than does brother and sister mating. Apparently he is unaware that this has already been noted.

M.S.P.

*Hereditas*. Band VII. Häft 2. Pp. 145-232.

The current number of *Hereditas* is noteworthy for a short note by Gert Bonnier on "the so-called vermilion duplication." Vermilion is one of the early discovered sex linked mutations in *Drosophila*, and has proved to be a valuable one for further study. In connection with it, and particularly with Bonnier's suggestion, two other mutations should be mentioned; a lethal which appeared first in 1916, and is known as vermilion "deficiency," and a mutation at the left end of the sex chromosome known as "vermilion duplication." Vermilion deficiency like other sex linked lethals cannot exist in a viable male; its linkage relations showed it to be near the vermilion locus; its connection with vermilion was shown by the fact that when wild type females heterozygous for the lethal were crossed with vermilion males, all the daughters that received the lethal from their mothers, were vermilion eyed, although the vermilion gene received from the father is ordinarily recessive. The lethal was thus shown to be of the type known as deficiencies, in which a portion of the sex chromosome is either absent or inactivated, this portion containing the locus of one or more genes necessary for existence, (hence the lethal action,) and incidentally the locus of vermilion. "Vermilion duplication" was believed to consist of a portion of the sex chromosome, containing the vermilion locus, attached irregularly to the left end of the sex chromosome. The reason for this belief was that mutant stocks can be made up homozygous for vermilion, and yet showing the wild type character in both sexes; when females of such stocks are mated to vermilion males, all the sons are wild type and all the daughters vermilion, as would be the case if vermilion were dominant, and not recessive, to the wild type. The fact that the mothers were wild type indicated that the mutant gene "vermilion duplication" affected the fly like the wild allelomorph of vermilion, and dominated the vermilion gene; the fact that the daughters were vermilion indicated that when both chromosomes contained the vermilion gene, while only one of them contained the duplication, the latter was unable to dominate the double opposing tendency.

Bonnier now points out that these effects ascribed to vermilion duplication are really equivalent to regarding that mutant as a recessive gene whose recessive effect

is to suppress the action of vermilion; and this view he supports somewhat strongly by means of the more recently available triploid material. In females with three sex chromosomes the vermilion eye only appears if all three chromosomes have the vermilion gene, showing that one gene of the wild type effectively counteracts two vermilion genes, whereas a single vermilion duplication cannot do so. Even more decisive is the observation now reported by Bonnier, that triploids with three vermilion genes and two vermilion duplications are vermilion eyed.

Bonnier's conclusion does not require any reconsideration of well established cases of translocation, involving several known genes, such as the Pale-translocation of the second chromosome; it does, however, replace the "duplications" by a new class of recessive suppressors, the existence of which will be of great importance in studying the nature of dominance.

R. A. FISHER.

*Journal of Applied Psychology*, Vol. 8., No. 1. March, 1924. *Temperament, and Mentality in Maturity, Sex and Race*. S. D. Porteus, Director of Research Psychological Laboratory, The Training School at Vineland.

Professor Porteus in this article, challenges three statements which have been recently made by those employing intelligence tests; that there are no significant mental differences between the sexes, that mental development reaches its maximum at the age of 15, and that race is an almost negligible factor so far as mental development is concerned. The author bases his criticism of all three on study of brain growth and common sense! In regard to the first problem, the brain growth of the female is less than that of the male at each age from six years onwards, but roughly parallels it to fifteen years of age, thence it diminishes in rate considerably and ceases about the eighteen year level. To this post-pubescent growth, the male owes his superiority, because in this period the assumption is that the supra-granular layer in the cerebral cortex (essential to learning and self-control) is then developing in the male but ceases to develop in the female. Again, by measuring thousands of individual heads and calculating brain capacity, it is clear that brain growth in the male does not stop at 15 or so, but continues to the ages 20—30. The author contends that if mental growth ceases at 15 years, then this additional brain growth has no connection with growth of intelligence, an unlikely assumption. The same line of argument forms the basis of his criticism as regards racial differences, and is supported by differences in achievement of children of different nationalities when tested with the author's maze test.

M. COLLINS.

*Journal of Genetics*, XVI, No. 2. Pp. 125—268. Jan. 1926.

The short discussion (pp. 184—201) between Prof. W. E. Castle and Prof. R. C. Punnett, on the genetics of the white markings on the "Dutch" patterned rabbit, will be of interest to eugenicists, since the type of inheritance appears to be very similar to that governing the quantitative characters (health, intelligence, etc.,) in man. The two authorities differ somewhat sharply upon the interpretation of their experiments; though both are agreed that many heritable factors modify the distribution of white; Prof. Castle asserts, and Prof. Punnett denies that one of the principle factors occurs in at least three allelomorphs. One method of clearing up the question is to synthesise a race of pure self coloured rabbits, by crossing Dutch marked strains. Prof. Punnett claims that this can be done, and that an experiment of Prof. Castle's demonstrates its accomplishment. Prof. Castle denies the possibility and points out that Prof. Punnett's own attempts to do so have failed. Each thus relies on the experiments of the other. To the outsider it would appear that the attempt to disprove multiple allelomorphs is a hopeless one, since though one's own stock may contain only two, any other experimenter may be in possession of a third; further, Punnett freely postulates incomplete dominance, a phenomenon which is rare save in conjunction with multiple allelomorphism. On the other hand, the positive demonstration of multiple allelomorphism is a difficult matter; in his linkage method, if carried out rigorously it is probable that Castle has found a way to resolve the difficulty.

The long paper (pp. 125—189) by Bonnevie and Sverdrup is a genealogical study of the occurrence of twin births. The authors mistakenly describe their work as a "thorough statistical investigation." It is irritating to find that in

extensive genealogical enquiries, the relations of the father have been deliberately omitted, and no data given as to paternal inheritance. This circumstance does not, however, prevent the authors from attempting to discredit the conclusions of Davenport, who does present such data, and who finds the inheritance about equally strong on both sides, although they have no alternative explanation to give of Davenport's observations.

R. A. FISHER.

*The Journal of Heredity*, Vol. XVI, September, 1925.

Every number of this Journal bears witness to the vast amount of energy now expended in the United States towards the improvement of plants valuable to man. This is particularly the case with regard to fruits of all kinds. In this number is found a study by J. P. Griffith of the Queensland Raspberry from Australia which is stated to be particularly well suited to tropical conditions.

A note states that the Director of the Research Bureau, Minnesota State Board of Control, has outlined a plan for a STATE CENSUS OF MENTAL DEFECTIVES. So far only preliminary surveys have been made but these indicate a higher percentage of mental deficiency than is generally realised. Eight towns with a total school population of 5974 have been investigated and 4 7/10 of these children found to have an intelligence quotient of less than 75. 75% of the defective group is estimated to consist of morons and only 5% of idiots.

October, 1925.

C. V. Green and H. R. Hunt. *Birthrates in families of Michigan State College Graduates.*

Michigan State College was founded in 1857. It began as an Agricultural College and has gradually come to include other applied sciences. These authors have attempted by means of a questionnaire sent out to graduates, to obtain data regarding marriage and children of former students. Only those graduates were circulated who left between 1870 and 1899. Women graduates being few in number were excluded. It was thought that if 1899 was taken as the latest date for graduation the wives of those who married would be mostly forty-five years of age and over. 718 men graduated between these dates, 515 are known to be living. Questionnaires were mailed to 447 being all whose addresses were known. Of those questioned 359 answered forming 80.3% of those questioned. It is probable that those who answered are not a random selection of the graduates since a very small percentage reported themselves as unmarried. It is probable that among those who did not answer the unmarried are relatively more numerous. The particulars obtained from those who did answer show that the decline in the birth-rate has probably not been significant. An attempt was made to ascertain whether the group is maintaining itself. The group totalling 547 individuals including husbands, wives and single men has produced 716 children. If the group is to maintain itself 574 children must attain 23 years of age, this being the average age of graduation of the father. Using Glovers' Tables the number of children surviving to twenty three years of age would be about 561. It is probable, however, that the survival rate among the children is higher than that in the population at large. It is, therefore, concluded that the group is maintaining itself. Nevertheless, the figures are not very encouraging in as much as, since the graduates are mostly dwellers in the country, it might be expected that they would do more than just maintain themselves. During this period the population of the United States has nearly doubled. While this increase has been in part due to migration it has been in part due to an increase in other sections of the population. It therefore follows, that this group even if it is maintaining itself absolutely is not maintaining itself relatively. The birth-rate can, therefore, hardly be considered satisfactory.

E. Roberts and R. J. Laible have made a study of heterosis in pigs. The cross concerned was Duroc Jersey by Poland China. The progeny at six months averaged about 50 lbs. heavier than pure breds.

November, 1925.

This number opens with an interesting article on Mendel. An article by J. E. Nichols of the Animal Breeding Research Department in Edinburgh discusses the problem of segregation in half-bred sheep. The term half-bred is used by British



farmers to designate the cross Border Leicester by Cheviot. This cross has proved very valuable particularly in the production of mutton. It is becoming the practice to let these half-bred sheep breed without the re-introduction of either of the parental strains. It is constantly asserted that the half-breds breed true. Mr. Nichols, however, does not find that this is so. He has not followed the inheritance of particular structures but rather those characteristics which taken together constitute the parental types. He has observed some variation in F I. and considerably more variation in F II. It is, therefore, clear that this cross does not exhibit blending inheritance. The explanation of the persistence of the half bred type in a flock interbred for many generations into which pure blood has not been introduced is apparently to be explained by careful selection of the flock master.

A note in this number reports that the State Board of Control Bureau of Child Welfare in Iowa is listing inhabitants of that State who are ineligible to marry. These persons are inmates of insane asylums or hospitals and 100,000 appear on the first list.

A.M.C.S.

"The Lancet," 20.2.26. Page 423.

*Physique of Health of Air Force Recruits* in the year 1925.

In reply to Questions, Sir S. Hoare replied: The number of men passed fit for service in the Air Force was 2885; the number rejected as medically unfit was 3414, or a percentage of 54.19 of those medically examined. The principal causes of rejection as revealed by examination by Service Medical Officers were as follows:—

	Per cent.
Defective Teeth .. .. .	13.0
*Diseases of the Heart .. .. .	12.4
Poor Physique .. .. .	9.5
Diseases of the Ears .. .. .	8.8
Deformities of Feet .. .. .	8.6
Diseases of the Lungs .. .. .	8.1
Defects of Vision .. .. .	7.3
Defects of Extremities .. .. .	2.3
Other Causes .. .. .	30.0

\* Valvular disease or disordered action.

(Note:—This excludes previous rejections of gross defect made before examination by Medical Officers. London, 50% so rejected.)

Page 422.

Percentage Birth-rate for this country and for principal Countries in Europe as given by Mr. N. Chamberlain: figures given are for the most recent years for which information has been received.

	Birth-rate per 100 Population.
England and Wales 1925 .. .. .	1.83
1924 .. .. .	1.88
Sweden .. .. .	1.81*
France .. .. .	1.89
Finland .. .. .	2.24
Germany .. .. .	2.04*
Denmark .. .. .	2.54
Switzerland .. .. .	1.87
Netherlands .. .. .	2.52*
Belgium .. .. .	1.99
Spain .. .. .	2.99*
Hungary .. .. .	2.68
Czecho-Slovakia .. .. .	1.95*
Austria .. .. .	2.25*
Italy .. .. .	2.93

\* Provisional.

AGNES BIRRELL.

*Mensch en Maatschappy.*

The January number of the Dutch Quarterly journal *Mensch en Maatschappy* (Man and Society) contains an article of Mr. G. H. Van Lanten on some Demographical Data on the Amsterdam Jews. In general this population, settled for centuries in the Dutch capital seems to be regressing, specially by the lowering birth-rate which soon will be surpassed by the rate of mortality. The proportion of male to female births is higher than the ordinary one ( $\frac{108}{100}$ <sup>1</sup> during the years 1919—1923).

A second reason for regression is the augmentation of nervous diseases. It is interesting to note that this population of Jews bears its own stamp as to the choice of profession, the care of health, the care of food, the intensive family-life,—by which they are contrasted with the rest of the population. Special racial traits are beginning to disappear by mixed marriages and will make it impossible in the future to keep statistically apart this interesting part of the Amsterdam population.

The yearly registration of the Netherland National Bureau of Statistics have enabled Dr. P. A. De Wilde to calculate the average duration of life in the medical profession, compared with that of the whole population. This relation proved to be  $\frac{2}{3}$ <sup>2</sup>. In Holland the expectation of life for the physician is therefore +5 years less than for an ordinary person (1926, Op. 79.)

M.N.v.H.

*Mental Welfare*, Oct. 15th, 1925.

C. H. L. Rixon, M.D. *The Diagnosis of Adolescent Mental Conditions with Special Reference to Delinquents* (pp. 81—87).

The writer, who is the Medical Officer of H. M. Prison, Brixton, states that of the 8,000 to 9,000 male prisoners received annually, several hundred are remanded in order than their state of mind may be the subject of medical investigation.

Well-marked cases of insanity prove to be rare, the majority being in the early stages on which diagnosis is most difficult. Dr. Rixon cites a number of typical cases of abnormal and subnormal offenders, who for the most part proved to be uncertifiable under either the Lunacy or Mental Deficiency Acts.

He does not consider that epilepsy is a common Cause of Crime, and even where the plea of fits has been sustained, the offence may be found to be quite unconnected with the disease. Patients suffering from dementia præcox are, however, liable to commit sudden acts of violence upon very slight provocation.

E.I.C.

*National Health*, Oct., 1925, pp. 116—117.

J. J. Heagerty, M.D. *Medical Examination Before Marriage*.

The compulsory provision of a medical certificate as a pre-requisite for marriage has been widely discussed chiefly from the standpoint of the prevention of the transmission of venereal diseases and mental deficiency. In the United States the 'Eugenic Marriage Law' has been adopted by seven States, viz., Oregon, North Dakota, Wisconsin, Alabama, North Carolina, Wyoming and Louisiana. In North Dakota and North Carolina certification laws include tuberculosis. In the year 1923 'Eugenic Marriage Laws' were defeated in fourteen States.

The 'Eugenic Sterilisation Law' was adopted by a number of American States but in many cases has been repealed or declared unconstitutional. Fifteen States have now or have had some law dealing with sterilisation of the mentally unfit. Such legislation has generally been found impracticable. Laws for the control of the spread of venereal diseases have in most cases failed to be of any practical value.

The medical examination before marriage is a reasonable and wise procedure in the writer's opinion, but whether it should be made compulsory requires much consideration. The objects of such an examination are threefold, viz.,

- (1) To give candidates for marriage knowledge of their physical condition;
- (2) To delay the marriage of those who are suffering from a communicable disease until the disease is arrested;
- (3) To prevent the marriage of the unfit.

It may be urged that the man who has a physical defect and who is cognisant of his condition may be expected to avoid undue strain and thereby prolong his life and his earning capacity. The young woman who has a mitral or a nephritic lesion and is aware of her condition will avoid undue strain in her maternal life. The prevention of the transmission of disease by delaying marriage would be an obvious gain to the community. The prevention of the marriage of the totally unfit would be of great social advantage.

Sterilisation of mental defectives is a more difficult question. In the United States surgical sterilisation has proved to be impracticable. Sterilisation by X-rays is not always effective nor are the results always permanent.

Medical examination before marriage has obvious advantages and public opinion seems to be moving in that direction. Parents are seriously considering the marital fate of their children. Poverty, vice, and crime are often the product of disease, and a large number of delinquent boys and of girls who drift into prostitution come from homes which are the product of disease. A proper control of disease through medical examination, with a corresponding reduction in poverty, vice and crime, is quite possible.

The women of England, Canada, and the United States have discussed birth-control as a preventive of many of our present-day evils, and a great many women favour it and practise it. While it may meet the problem of over-population it does not improve our social or moral conditions. Rather does birth control, which is largely confined to the well-to-do and middle classes, tend to cause a disproportionate increase in the less desirable members of the community. Medical examination before marriage may effect what sterilisation or birth-control have failed to do. But its success will depend largely upon public opinion, and the co-operation of the public and of the medical profession. Legislation cannot safely go in advance of public opinion, and of the judgment of medical authorities.

This is a sensible and temperate article on questions of vital social importance. Two conclusions can be drawn from it—viz., the wisdom of profiting by the experiments or, it may be, the mistakes of other nations, and the necessity of educating the public.

J.A.L.

October, November, December, 1925    January, 1925.

**Edris Griffin.** *The Rise and Progress of Infant Welfare Work in Delhi.*

In this valuable series of articles the writer gives an account of some remarkably successful child welfare work in Delhi carried on by her and her colleague, Miss Anne S. Graham. The results have been most gratifying.

Delhi, a city of about 300,000 inhabitants, is an orthodox city, wedded to ancestral customs and opposed to change in social usage. The Medical Officer of Health found that owing to caste regulations he could effect little, but he gave the two ladies a free hand and the results of their labours show how much can be effected by scientific knowledge and training, and by devoted and intelligent labour. The difficulties were great. The conditions under which child-birth takes place were appalling. Most of the suffering of mothers and infants was caused directly or indirectly by the dais (midwives). These women have much influence over the people; they are the doctors, confidential friends and general advisers in almost every house. They are poor, illiterate, generally of the lowest caste. They have no special knowledge or training. Their standard of cleanliness is very low. Their notions regarding the feeding of women in child-bed are of the crudest character. They have no knowledge of obstetrics and breech presentations in their hands were practically always fatal. But, as there was no alternative, the dais had to be tolerated, and the writer and her colleague set about the task of their instruction and training. Classes were instituted, and instruction given on scientific lines. Some of these women proved very intelligent and learned quickly, while others were dull and stupid and profited little by the teaching given. As they cannot read or write the teaching was wholly practical. The Punjab Central Midwives' Board now holds examinations twice a year, and has a simple practical one for dais. About 40 dais in Delhi have obtained the certificate.

The feeding of the baby claimed much attention. The native practice had been to give the infant for the first three days "Guttae," a concoction of brown sugar, spices, herbs, and sometimes a copper coin or an iron nail is put in "to

give the baby strength.'! It is only after this proceeding that the baby is put to the breast, the mother meantime being in a state of great discomfort owing to distended mammae. The infant's eyes are blackened, and its forehead smeared with black so as "to avert the evil eye." The child is given no clothes for a period varying from one week to forty days, because it is considered to be unlucky to prepare garments beforehand. Delhi is very cold in winter, and consequently numbers of infants die from pneumonia due to exposure.

It is evident that the ladies had all their work cut out for them. They began their work early in 1915.

The following are the rates of infant mortality in Delhi for the period 1914—24.

per 1000.	per 1000.
1914—313·42	1920—232·45
1915—249·33	1921—232·39
1916—265·66	1922—187·46
1917—256·24	1923—226·42
1918—323·32	1924—174·02
1919—268·33	

Some of these fluctuations are accounted for by epidemics of plague, relapsing fever, dengue, and influenza. The falling figures show how much can be effected by well directed effort.

J.A.L.

*The New Generation*, August, September and November, 1925. Published by the Malthusian League, Westminster, London.

Reports of two new Birth Control Clinics, are presented, one in North Kensington, and one in Wolverhampton. Dr. Drysdale concludes his articles on "The Ethics of Birth Control in the August number of the journal.

Under the signature of B.D., Churchmen as Medical experts are criticised in the September number, and Stella Browne has an article on Birth Control and Labour Politics. Dr. Drysdale has a long review of Miss Ettie Rout's book on "The Morality of Birth Control." There is a note concerning the New York Clinic, in which it is now legal to give instruction to adults who can be said to be diseased in any way.

The November number contains an answer to Sir John Robertson, who gave an address criticising adversely 'un-natural' birth control, also an article by Dorothy Jewson on the Labour party conference and birth control.

Attention is drawn to the formation of a New Health Society, formed by leaders of medical and scientific thought.

H.C.C.

*Progress*. April-June and July-September, 1925.

The British Institute and National Council of Social Service, London.

Edward Fuller in the later number of this journal points out that the Declaration of Geneva may fail of its object if people assume that it is already 'fait accompli.' He draws attention to the extent to which the statutes have been carried out in Great Britain.

G. S. M. Ellis has an interesting article in the July-Sept. number on Voluntary day continuation Schools.

Under social notes such varied subjects as, Empire Settlement and Emigration, a Dutch Welfare scheme, Juvenile unemployment, a Belgian Observation School, where psychological investigations are made of delinquent boys, Child immigration into Canada, Prison Reform in Germany, are discussed.

H.C.C.

*Social Welfare*, August and September, 1925. Published by the Social Service Council of Canada. Toronto.

This is entitled the 'Labour number,' and discusses problems of industrial and labour conditions in Canada. Farming, mining and juvenile immigration are each the subject of thoughtful articles by experts.

H.C.C.

*Sociological Review.* Vol. 17, April, 1925.

Mr. C. B. Fawcett has an interesting article on *The Distribution of Population over the Land*. The concentration of the greater part of the world population on a relatively small part of the land area is stressed. The author calculates that two-thirds of the world population are crowded into one eighth of the available land. He goes on to attempt to account for this remarkable distribution. He finds that of the fifty millions square miles or thereabouts of available land three million square miles are too cold and thirteen millions too dry leaving only two thirds of the land with sufficient heat and moisture for cultivation. Of this remainder, however, only one third, or sixteen million square miles is 'good' or 'cultivable' land, one third being 'productive' but not 'cultivable' and the remaining third being too cold and dry. It is then calculated that, if these sixteen million square miles were made as productive as the 'cultivable land' of France is at present, a population of 5,760 millions could be supported and that, if this area was made as productive as British India is now, 8,000 millions might be supported. In these calculations it is assumed that the present methods and standards of production and consumption continue and that all the cultivable lands of the hot belt are fully used.

A.M.C.S.

*Statistical Bulletin.* Metropolitan Life Insurance Co. Sept., 1925.

Figures are given which show how greatly the expectation of life has increased among the American and Canadian industrial population. The expectation of life at birth in industrial families was 65.6 years. There has been a gain since 1919 amounting to 19% in the expectation of life. It is notable that conditions have improved as much if not more for coloured persons than for white persons.

Some details are given regarding the low infantile mortality amongst wage earners. The figure for the general population is 80.8 per 1,000. That for the infants insured with the Company is 38.9 per 1,000. It is, however, to be noticed that insured babies are on the whole older than uninsured.

Smallpox seems to become more frequent and more deadly in America and Canada. 3.5 deaths occurred for each hundred cases in 1925 as against less than one death per hundred cases in 1923.

A study of seasonal variation of suicides in New York City in 1910—1923 seems to show that higher than average rates occur in months having the highest range between maximum and minimum temperatures. In general these results and those reached previously in the Bulletin confirm the observations of Morselli and others.

A chart is given showing the death-rates for diarrhoea and enteritis in twenty-three States between 1900—1924. Up to 1908 there was little improvement. From 1908 onwards there has been a rapid downward sweep of the line representing death-rates from these diseases. Since these diseases attack children there is clear evidence of increased parental intelligence and care for children. Among children under one year of age in the United States Registration Area in 1910 nearly 17% died before reaching the second birthday. In 1922 the mortality was 8%.

There is a very interesting analysis of 1800 fatal cases of Diabetes. Only 81 cases had received Insulin at any one time. Young persons were given Insulin more often than older persons. The most remarkable fact forthcoming, however, is that Insulin was given in the majority of cases only in the very last stages of the disease. 54.6% of those receiving Insulin began to receive it less than a month before death. In 17% of the cases of those who received Insulin the treatment commenced either on the day of death or on one day before. It would appear that many of those who received Insulin treatment in earlier stages discontinued the treatment later. As a result fatal relapses often occur. These interesting observations show that the still considerable death-rate from Diabetes cannot be interpreted as showing the failure of the Insulin treatment.

A.M.C.S.

*The Training School Bulletin,* Sept., 1925.

D. Clinton P. McCord. *Psychiatric Examination in a County Court* pp. 70—74.)

On Dec. 8th. 1924, in the Courthouse of Catskill, N.Y., was staged a demonstration of what criminal Court proceedings might be if all persons concerned with

the machinery of justice were free of prejudice and traditionalism, and had the courage and vision to insist that real justice must be based on "the truth, the whole truth, and nothing but the truth."

Ten criminals were examined by a leading psychiatrist over a period of 3 days and evenings, in the presence of the judge and of the lawyers for the defence. In every case the defending attorneys changed their pleas of "not guilty" to "guilty," and expressed themselves as being in agreement with the recommendations of the psychiatric report. Two of the prisoners were found to be feeble-minded and were committed to Rome State School, one was psychotic and was committed to Mattewan State Hospital for the Criminal Insane, and the remaining 7 who had been sentenced to Elmira Reformatory had the sentence suspended, and were instructed upon certain probationary provisions to be complied with in line with psychiatric opinion.

E.I.C.

October, 1929.

Lloyd N. Yepson. *The Relation of a Mental Clinic to the Community.* (pp. 92—96.)

The mental clinic of an institution or social welfare agency can be of real service to the community by offering its services outside its own organization. Vine-land institution has on various occasions held clinics of several days' duration at neighbouring towns by request, with the result that a large number of children were found to be in need of special education, and the necessity for increased provision for the mentally retarded was effectively demonstrated. The late Dr. Fernald of Massachusetts initiated the custom of having a certain day during the week when the clinic at the institution would be open to all seeking advice. Such work has proved of immense value to the State, and undoubtedly many individuals have been made more effective and efficient workers as the result of their consultations at this clinic.

E.I.C.

*Weekly Notes on Child Welfare Topics.* United States Department of Labour, Children's Bureau. Washington. October to December, 1925.

Although a decrease in the infant death rate of Canada is reported, the maternal mortality rate is the highest since 1921. New Zealand has the lowest infant mortality rate. In Great Britain the Equal Guardianship Bill has been passed. The Children's Bureau reports that the U.S.A. has still a higher infant death rate than Australia, the Netherlands, Norway, Sweden, and the Irish Free State. Great Britain is expending nearly five times as much as the U.S.A. in 'grants-in-aid' to local committees, so that about 99% of the children born in a year in England and Wales and 13% of the expectant mothers are reached, by health visitors.

In Cincinnati the negro death rate is double that for the white people. In Bavaria insurance is now provided against injuries to school children received in school, or grounds, on excursions, or going to and from school.

Under the auspices of the Save the Children Fund, work-schools have been opened in Buda-Pest for children over 12, who earn a little pay while they learn an handicraft.

The Widows' Orphans', and Old Age Contributory Pensions Bill, Great Britain, will affect about 30,000,000 persons including wage earners and their dependents.

*The World's Children*, October, 1925, December, 1925, and January, 1926. Published by the World's Children Limited, London.

This is the official journal of the Save the Children Fund, and a long article on the Congress at Geneva is included in the October number. News is given of the Child in such various countries as Kentucky, Greece, Brazil, California, Switzerland, Canada and Bulgaria. The Eugenic Education Society, London, communicates an article on "The Heredity Factor in Child Welfare."

The December and January magazine (one number) contains an article on Relief and Reconstruction in South East Europe, where the children have been the greatest sufferers from the general upheaval of the Great War. Amongst measures adopted may be mentioned the work-schools at Budapest, a refugee settlement in Bulgaria, the placing of derelict children in Constantinople, and the establishment

of new villages in Macedonia, not forgetting the successful founding and administering of a hospital by Dr. Katherine Macphail in Belgrade.

Child health in England, in Shanghai, and in Tonga is reviewed. A new experiment in London, "The Children's House" has just been inaugurated, in which it is hoped to foster harmonious friendships between boys and girls from infancy up to adolescence.

H.C.C.

*The World's Health*, December, 1925. Pp. 505—511.

Louis I. Dublin, Ph.D. *The Excesses of Birth Control*.

This is an address delivered before the sixth International Neo-Malthusian and Birth Control Conference, New York City, March 26, 1925. The subject is viewed mainly from the American point of view by an opponent of Birth Control.

Birth Control is viewed from the emotional point of view rather than from that of scientific analysis. It considers the individual rather than the interests of the State. It contemplates the immediate interests of the individual more than the permanent interests of the State. The State, for its own protection and having regard to its permanence, expresses a general disapproval of celibacy and proscribes the dissemination of birth control practices.

The rapid increase in the population of the United States has been largely due to the influx of immigrants. The crude rates of natural increase are misleading. Probably the actual increase is well below 20 per 1000. The birth-rate has declined over 30 per cent. in the last 30 years. At the present rate it will take over 120 years to double the population. To maintain the present population it is necessary on the average for every ten married couples to have 26 children, but, as one marriage in six is childless, the necessary figure is not 26 but 31. Investigations of middle-class families in the Middle West have shown that in the course of one generation there has been a shrinkage in family size from 5.4 to 3.3 children. Contraceptive methods are largely responsible for this shrinkage. There is no reason to suppose that there is any danger of a too rapid increase of population in the United States but rather that the rapidly declining birth rate may result in a stationary population. There is some risk of increasing the proportion of defective and dependent stock, as it is always the least desirable parents who are the last to curtail their fertility.

This address is a frank statement of the case against birth control. The subject is too large for discussion here. Something might be said on the other side, but the Neo-Malthusians would need to walk warily.

J.A.L.

## OFFICE NEWS.

There has been a noticeable acceleration in work concurrently with the growth of popular interest in racial questions. It would seem natural to assign as causes firstly Professor Huxley's wireless talks on the 'Stream of Life,' and secondly, the appeal which the Society recently issued to business men.

Members and fellows are asked to notice the rapid extension of propaganda work and to compare with it the low numerical strength of the Society as measured by its fellowship. The Society's Constitution obviously limits fellowship to a group personally known to each other, and which therefore depends for its recruitment largely, if not wholly, on personal effort in arousing and stimulating interest in Eugenics to the twenty-one shilling per annum intensity. One fellow has in the last three years brought in an average of ten recruits yearly with numbers of members and five others bring in three to four each year. To back up adequately the popular propaganda for which the general public is ready, calls for a similar effort on the part of every fellow of the Society.

The Library Catalogue is being widely appreciated and has so much increased library work that we must appeal for an assistant honorary librarian: (three half days weekly would not be too much time to cope with the work).

Fellows will notice with pleasure the recent election of Sir Bernard Mallet, K.C.B., as a second Vice-Chairman, and of Dr. D. Ward Cutler as an additional Honorary Secretary. Dr. Cutler has made himself wholly responsible for the secretarial work of the British Association Sub-Committee and for the arduous task of collecting the funds needed by the Committee for Research; the Secretary has thus been relieved of all work in connection with these activities.

### VOLUNTARY WORK.

Miss Bostock has continued her valuable help in research work which could not go on without her—we cannot measure the thanks we owe her in a sentence.

In answer to a *Times* advertisement the following have come to our aid in the office: Miss Lamb (lately of Cambridge) circularises new groups for propaganda and helps in many ways. Miss Lauder is managing pamphlet sales, loan of literature, and heavy posting. Miss Noal does library research, a most needful and long-wanted adjunct to the office. Miss Cheffys, who is a secretary, does evening correspondence. Miss Sharpe is helping Mr. Lidbetter. Mr. Eldon Moore is working both with research and with journalistic writing. Mr. Callis and Miss Crawley are helping in Miss Lawrence's research.

### THE GALTON DINNER.

The Society assembled as usual on February 16th, to celebrate the Anniversary of Sir Francis Galton's birth. The dinner was at the New Criterion Restaurant. So many Fellows were present that it was necessary to have the lecture in the dining room. Amongst the guests were Mrs. Barnes, Dr. Dale, Miss Violet Markham and Miss Flora Annie Steel.

The Bishop of Birmingham's lecture is printed in full—Major Darwin's remarks after the lecture were as follows:—

It has often been said that the absorption of a new idea into the mind is a painful process; but I think that it would be even more true to say that a change of opinions always gives a shock to our mental constitutions.

Young people adopt new views constantly without any apparent jar; but young people appear to me to abandon an opinion when once it is firmly adopted with even greater difficulty than we who are old. In this connection I should like to quote some words said to have been uttered by J. S. Mill in the House of Commons: "Every wise man knows that some of his opinions are mistaken; but no wise man knows which of his opinions are mistaken, because if he did he would change them." Everyone of us will, I believe, give lip service to this aphorism; whilst I fear none of us absorb it into our minds in such a way as always to make us welcome new and unpalatable conceptions, when the proofs are sufficient. Indeed very few men have such a nobly open mind as that evidently possessed by our lecturer.



As to the majority of us, the worst of it is that we are apt only to seek for arguments which bolster up our preconceived notions, leaving all arguments favourable to our opponents in the cold.

Moreover we generally look for support in those fields of thought with which we are most familiar; with the result that the man of science often condemns unfamiliar demands for reform as being unscientific, the politician condemns them as unpatriotic; and the religious man as immoral.

We eugenists are certainly trying to introduce reforms the necessity for which has not previously been in the least realized; and it is not at all surprising, therefore, that we have at times been condemned as unscientific, unpatriotic and immoral. No doubt as the knowledge of our aims become more widespread, these attacks will lessen. We are winning in the region of science, because Eugenics is founded on science. We ought to have no difficulty in the end in persuading politicians that the nation of the future would be greatly benefited by Eugenic reform.

But if we fail in the region of religion and morality, all this will not avail; for we must get the Eugenic ideal incorporated in the moral code of the nation in order to ensure success. And it is for this reason that I attach such immense importance to the support offered to us by the Bishop of Birmingham.

We have had many distinguished individuals who have delivered the Galton lecture in the past; and all of them have delivered interesting addresses, some of them, however, having had little bearing on Eugenics; but I believe we have never had an address more likely to benefit our cause than the one to which we have just listened.

Our lecturer asked me just now not to be afraid of criticising his address at its close; but this I am not at all inclined to do, for I am certainly in full accord with it in all essentials. At this I rejoice, because it gives me added confidence in the righteousness of our cause. As to any minor points as to which I may find myself not quite in accord with what we have heard, that is a matter of small importance. When speaking on these difficult subjects I often feel that I myself may be in error; but I console myself with the thought that to express our opinions honestly is the best way of dissipating ignorance. It is ignorance we have most to fear, and when I feel I may be in error I remember Bacon's wise words that "the truth cometh sooner out of error than out of ignorance." The Bishop's Address will set all men who read it thinking on right lines, and in this respect it will be invaluable."

The Dean proposed the vote of thanks and Professor MacBride in seconding commented on the Bishop's references to inherited acquirements and impairments by remarking that his support of these theories was coupled with a belief in the importance of selective agencies as being more rapid in their action.

#### MEMBERS' MEETINGS.

Three interesting papers were read to the Society this Quarter. The titles are given below. Attendances were not large but discussion is more prolonged and of greater interest than last year.

Wednesday, January 27th, at 8-30 p.m. "The Earlier Inhabitants of London." Professor F. G. Parsons, F.R.G.S., F.S.A.

Wednesday, February 10th, at 5-30 p.m. "Evolution of the Prehistoric Races." H. F. Humphreys, M.C., M.B.

Wednesday, March 10th, at 8-30 p.m. "Sterility and Vitamin Deficiency: A Review." Dr. A. S. Parkes, Ph.D.

#### THE FILM.

By the kind co-operation of the British Social Hygiene Council the Eugenics film has been shown to large audiences in the North with great success. Miss Lodge used it in the Hoylake Health week, and it has been shown in London. Two Fellows have arranged for showings in their own district and we should be very grateful to any who could introduce it to their neighbourhoods. Experience shows that it appeals to working-class audiences almost more than to the educated.

The Film was shown on Wednesday, January 26th, under the auspices of the British Social Hygiene Council at Blackpool; there was a large audience.

On Friday, February 11th, the Film was shown at Southport, during Health Week, and was much appreciated.

On Sunday, February 28th, Mr. Lidbetter exhibited the Film to a Bethnal Green Men's Meeting, in the afternoon.

On Monday, March 1st, the Secretary showed the Film to the Liverpool and Birkenhead National Council of Women.

February 17th, 18th and 19th. Shown by Miss Lodge at Hoylake.

March 1st. Inspected for subsequent showing at Leicester, by Dr. Killick Millard.

#### EXHIBITS.

On the 4th and 6th of January, the Secretary gave demonstrations of a Heredity Exhibit in Bedford College, to visitors attending the Refresher Courses of the Society of Women Sanitary Inspectors and Health Visitors; and an Exhibition on a larger scale was undertaken at Hoylake during Health Week, on the 17th, 18th and 19th of February. Miss Olive Lodge both lectured to the Film, which was shown every night, and demonstrated the Exhibit. This seems to have been a most successfully organised week, and the Eugenics Exhibit attracted much attention.

April 12th to 16th, the Exhibit was shown at the Central Hall, Westminster, during the Health, Hospital, Nursing and Midwifery Exhibition. Mr. Eldon Moore acted as Demonstrator.

#### COURSES.

The Society has once more been asked by the Committee of the Bishopsgate Institute to give a Course of Lectures in the lunch hour. This series was opened on the second Wednesday in January by Sir Arthur Smith Woodward, who gave a fascinating account of the discovery of the Piltdown skull, and explained its human interest, with excellent slides. The Syllabus and dates are given below. Fellows may be interested to introduce similar courses—or some of the subjects undertaken as single lectures—for students in their part of the world.

- Jan. 18th. Population. England and its Inhabitants.  
 „ 20th. The Census. Differential Birth Rates.  
 „ 27th. Cause of rise and fall in the Birth Rate. Infant Mortality. Health in the population.  
 Feb. 3rd. Evidence of Racial Defect. Deterioration.  
 „ 10th. Mental Inheritance. Heredity and Mental Deficiency.  
 „ 17th. Heredity and Mental Capacity.  
 „ 24th. Poor Law and Pauper Stocks. Pauperism, is it accidental?  
 Mar. 3rd. Unemployment. Our C3 groups: how they arise.  
 „ 10th. Delinquency and Prison Reform. Heredity amongst Criminals.  
 „ 17th. International aspects of Heredity. Emigration. Race Hatred and Race Mixture.  
 „ 24th. International aspects of Heredity (continued). Population pressure as a cause of Peace and War.  
 „ 31st. Summary.

#### MEETINGS.

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|---------|--|----------------------------|--|
| Dec. 30 | Society of Women Sanitary Inspectors and Health Visitors | Bedford College, London    | Recent advances in Genetics.                         |
|         | THE SECRETARY.   |                            |  |
| Jan. 1  | Conference of Educational Associations                   | University College, London | Distribution of Intelligence.                        |
|         | J. F. DUFF, Esq., M.A.                                   |                            |  |
| „ 4     | Conference of Educational Associations                   | „ „ „                      | The Analysis of Musical Ability and its Inheritance. |
|         | DILSTON RADCLIFFE, Esq.                                  |                            |  |
| „ 5     | People's League of Health                                | Northampton Polytechnic    | Eugenics.  |
|         | DR. TREDGOLD.  |                            |  |
| „ 11    | DR. KENNETH DICKSON.                                     | Hagadol Club, Whitechapel  | Mental Deficiency.                                   |
| „ 12    | Congregational Church Literary Society.                  | Queen's Park               | Eugenics and Progress.                               |
|         | R. DIXON KINGHAM, Esq.                                   |                            |  |

Jan. 12	Women Citizens . . . THE SECRETARY.	Dulwich . . .	Hereditv and the Poor Law.
„ 20	Members of Working Men's College . . . R. DIXON KINGHAM, Esq.	Ruskin College, Oxford . . .	Eugenics and Progress.
„ 27	National Federation of Women. MRS. HODSON.	Bournemouth . .	Hereditv in Social Pro- blems.
„ 27	Adult School . . . MRS. HODSON	Christchurch . .	Mental Inheritance.
Feb. 12	Women's Luncheon Club R. DIXON KINGHAM, Esq.	Huddersfield . .	
„ 15	British Women's Patriotic League . . . E. J. LIDBETTER, Esq.		English Poor Law.
„ 19	Women Citizens' Assoc'n THE SECRETARY.	Willesden . .	Hereditv and the Poor Law.
„ 23	Pioneer Club . . . DR. DRYSDALE.		Family Endowment.
„ 23	Liberal Association. N.E. Bethnal Green . . . E. J. LIDBETTER, Esq.		Origin and Development of the Poor Law and Hereditv in Relation to the Poor Law.
„ 25	Women Citizen's League . . E. J. LIDBETTER, Esq.	Rochester . .	Poor Law.
„ 26	Junior Scientific Society . . DR. MAPOTHER.	Oxford . .	Mental Side of Human Inheritance.
„ 26	Education Research Society THE SECRETARY.	Liverpool . .	Mental Inheritance.
„ 28	Brotherhood . . . R. DIXON KINGHAM, Esq.	East Cowes . .	Eugenics and the New World.
„ 28	Liverpool Adult School . . MRS. HODSON.	Liverpool . .	Eugenics and Ethics.
„ 28	Brotherhood. . . MRS. HODSON	Prescot . .	Eugenics and Christianity
„ 28	Fellowship Meeting . . . MRS. HODSON.	St. Helens . .	„ „
Mar. 2	Girls' Club (A Course of 4 Lectures). . . . . MRS. HODSON	Fullham, St. James's . . .	Biology.
„ 8	Church Guild. . . . . MRS. HODSON.	Anerley . .	Eugenics and Penal Re- form.
„ 11	Young Wives' Fellowship MRS. HODSON.	Weybridge . .	Birth Control.
„ 15	National Council of Women MRS. HODSON.	Haslemere . .	Hereditv and Citizenship.
„ 17	Parents' National Educa- tional Union . . . . . MRS. HODSON.	London Branch . .	Hereditv in the School Room.
„ 17	Constructive Birth Control MR. LIDBETTER.	Essex Hall . .	Poverty and Fertility
„ 20	Guardians . . . . . MR. LIDBETTER.	Lutterworth . .	Hereditv and the Charge- able Poor.
„ 22	Women's Society . . . MISS BARGMANN.	Congregational Church, Anerley	Eugenics.
„ 23	PROF. MACBRIDE.	Birkbeck College	Eugenics (Illustrated).

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